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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,949	08.08.2001	Raymond C. Loszewski	2177.1014-00	2566

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EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
1762	

1762

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

676

Office Action Summary

Application No. 09/857,949	Applicant(s) Raymond C. Loszewski
Examiner Bret Chen	Art Unit 1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) 13-22 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) _____ accepted or b) _____ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) _____ approved b) _____ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) _____ Some* c) _____ None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received

Attachment(s)

- 1. Notice of References Cited, PTO 892
- 4. Interview Summary, PTO 413, Paper No. _____

Art Unit: 1762

DETAILED ACTION

Claims 1-22 are pending in this application, which is a 371 of PCT/US99/30140.

Election/Restriction

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-12, drawn to a method of making a composite foam.

Group II, claim(s) 13-18, drawn to a composite foam.

Group III, claim(s) 19-22, drawn to an improved brake.

2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: All the groups are directed to an article and a process useful in the general field of aerospace and automotive brake pad industries. Group I has a special technique feature directed to a liquid precursor not required for Groups II-III. Group II

Art Unit: 1762

3. During a telephone conversation with Robert Conway on 9/20/02, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

It is noted that the claimed invention is directed solely to a method. The examiner suggests amending the title to reflect same.

Claim Rejections - 35 USC § 112

6. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

same issue applies to claim 10

Art Unit: 1762

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murdie et al. (6,077,464). Murdie discloses a method of forming a carbon-carbon composite material by providing an open-celled foam preform and densifying the preform with carbonaceous material for use in aircraft brakes (col.1 lines 7-11). Specifically, the reference teaches that high bulk densities can be obtained after CVD or liquid phase densification (col.2 lines 13-15). The use of a strut structure (lines 1-2) which is reticulated (line 32) and the use of liquid precursors (lines 18-25) are taught. Heating occurs to stabilize and carbonize the foam preform (col.4 lines 34-37). However, the reference fails to specifically teach a foam skeleton.

It should be first noted that a skeleton is defined as carbon in the form of an open lattice of ligaments, wherein the interconnected pores defined by the lattice have diameters of 0.5 to about 1.0 mm (p.4 lines 13-15). The lattice also has specific properties (lines 15-18). It is further noted that the claimed skeleton is not significantly different than the strut structure of Murdie. Hence, it

Art Unit: 1762

would have been obvious to the skilled artisan to utilize the claimed skeleton in Murdie's process with the expectation of obtaining similar results.

The limitations of claims 2-4 and 6-7 have been addressed above.

In claims 5 and 10, the applicant requires a specific material. This limitation is taught in col.2 lines 20-23.

In claim 9, the applicant requires a specific solid density. It is noted that Murdie fairly teaches of a densification process (col.10 line 28 - col.11 line 20). After reading Murdie, one skilled in the art would reasonably expect that the specific solid density could be achieved. It would have been obvious to densify the material to the claimed amount with the expectation of success. The same issue applies to claims 11-12.

Murdie et al. (6,315,974) and Klett et al. (6,037,032) have been provided for additional information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bret Chen whose telephone number is (703) 308-3809. The examiner can normally be reached on Monday through Friday from 10:00 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (703) 308-2333. The fax phone number for this Group is (703) 872-9310. Amendment After Finals should be faxed to (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group's administrative staff at (703) 308-9101.

March 10, 2003